



State of California – Natural Resources Agency

DEPARTMENT OF FISH AND WILDLIFE

South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201

www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



October 11, 2021

Governor's Office of Planning & Research

Oct 11 2021

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
4232 Las Virgenes Road
Calabasas, CA 91302
ESchlageter@lvmwd.com

STATE CLEARINGHOUSE

Subject: Notice of Preparation of a Programmatic Environmental Impact Report for the Pure Water Project Las Virgenes-Triunfo, SCH #2021090157, Los Angeles and Ventura County

Dear Mr. Schlageter:

The California Department of Fish and Wildlife (CDFW) has reviewed a Notice of Preparation (NOP) of a Programmatic Environmental Impact Report (PEIR) from the Las Virgenes - Triunfo Joint Powers Authority (JPA; Lead Agency) - a partnership of Las Virgenes Municipal Water District and Triunfo Water and Sanitation District - for the Pure Water Project Las Virgenes-Triunfo (Project). Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State [Fish & G. Code, §§ 711.7, subdivision (a) & 1802; Pub. Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect State fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 *et seq.*). Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by State law, of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 *et seq.*), or CESA-listed rare plant pursuant to the Native Plant Protection Act (NPPA;

Conserving California's Wildlife Since 1870

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 2 of 18

Fish & G. Code, §1900 *et seq.*), CDFW recommends the Project proponent obtain appropriate authorization under the Fish and Game Code.

Project Description and Summary

Objective: The JPA proposes to process surplus recycled water, currently discharged to Malibu Creek from the Tapia Water Reclamation Facility (WRF), through a new advanced water purification facility (AWPF). This recycled water would be stored at the Las Virgenes Reservoir for later use as drinking water. The Project would require construction of a new AWPF and new pipelines that would extend the existing recycled water system from the Tapia Water Reclamation Facility to the new AWPF; convey purified water from the AWPF to Las Virgenes Reservoir; and convey the “reject” wastewater stream from the AWPF to the Calleguas Salinity Management Pipeline.

Excess recycled water from the Tapia WRF is currently discharged to Malibu Creek, used in nearby sprayfields, or sent to Calabasas Creek which flows into the Los Angeles River. The Project, in part, is driven by regulatory obligations associated with the discharge to Malibu Creek. The current regulatory standards allow discharge of excess recycled water to Malibu Creek from November 15 to April 15. Discharge during the remainder of the year is prohibited except under an operational emergency, qualifying storm event, or to maintain minimal stream flows. Regulatory standards require discharge from the Tapia WRF to Malibu Creek from April 15 to November 15 to maintain a minimum stream flow of 2.5 cubic feet per second measured at the Los Angeles County gauging station F-130-R to help support steelhead habitat. However, new regulatory standards for discharge to Malibu Creek are being implemented and will have the effect of further restricting discharges absent significant and costly improvements to the Tapia WRF. Indirect potable reuse through advanced treatment of the excess recycled water was selected to redirect discharges from Malibu Creek, while improving regional water supply reliability and drought resilience.

Advanced Water Purification Facility

The AWPF would provide the additional purification steps needed to treat recycled water for potable use. Ancillary facilities are expected to include influent screening, tanks, and chemical storage and feed systems. The JPA has identified two sites for the new AWPF:

- Option 1 Agoura Road: The site would be graded with remaining areas maintained in a natural state or with added landscaping. In addition to the AWPF and ancillary facilities, the Agoura Road site will also include a pump station of sufficient size to deliver treated water to Las Virgenes Reservoir.
- Option 2 Las Virgenes Reservoir: The site is currently flat due to prior grading in the early 1970s. However, the site would require creating a new access road from Triunfo Canyon Road within Triunfo Creek Park roughly along the alignment of Pentachaeta Trail within lands owned by the Mountains Recreation and Conservation Authority.

Las Virgenes Reservoir/Westlake Filtration Plant

Las Virgenes Reservoir stores treated potable water. A new multi-port outfall and diffuser would be installed deep within the Las Virgenes Reservoir. Additionally, new reservoir mixing improvements may be necessary. The Las Virgenes Municipal Water District would continue to withdraw water from the Las Virgenes Reservoir and treat it at the existing Westlake Filtration Plant prior to introduction into the drinking water distribution system.

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 3 of 18

Pipelines

Recycled Water Pipeline to AWPf. The existing recycled water conveyance system does not reach either of the AWPf sites. Therefore, a new pipeline will be installed to connect the AWPf with the existing system.

- Option 1 Agoura Road site: two recycled water system connection options are under consideration:
 - Install a pipeline to the nearest point of connection, approximately 9,200 feet away, at the intersection of Lindero Canyon Road and E. Thousand Oaks Boulevard.
 - Install a new pipeline along Agoura Road to near Palo Camado Canyon Road (14,840 feet).
- Option 2 Las Virgenes Reservoir site: the same connection points would be considered but the new recycled water pipeline would also include segments on Lindero Canyon Road, Triunfo Canyon Road, and over land to the new site.

Purified Water Pipeline. A new pipeline would be installed to connect the AWPf with Las Virgenes Reservoir.

- Option 1 Agoura Road site: the new pipeline would be installed along Agoura Road and Lindero Canyon Road. At Triunfo Canyon Road, the new pipeline would extend a short distance to the east, and then proceed overland for approximately 0.5 miles along the Pentachaeta Trail to the reservoir discharge point. For this option, emergency discharge points would be installed to divert AWPf flows into local storm drains or sewers in case of emergency.
- Option 2 Las Virgenes Reservoir site: no new pipeline would be required for the Las Virgenes Reservoir AWPf site. The AWPf would simply connect to the new Las Virgenes Reservoir outfall.

Brine Line. Water purification at the AWPf site will result in a “reject” stream of salty water that requires disposal. The JPA will install a new Brine Line that will connect to the existing Calleguas Salinity Management Pipeline in Ventura County.

- Option 1 Agoura Road site: the new Brine Line would extend west along Agoura Road, and then either: (1) along local roads to Norwegian Grade (Moorpark Road) to connect to the Calleguas Salinity Management Pipeline, or (2) along E. Thousand Oaks Boulevard and through Thousand Oaks to connect to the Calleguas Salinity Management Pipeline near Hill Canyon Road. The Brine Line options range from 62,800 feet to 72,000 feet long.
- Option 2 Las Virgenes Reservoir site: the new brine line would follow the alignment of the Purified Water Pipeline (with adequate separation) to Agoura Road, and then follow one of the optional routes to connect to the Calleguas Salinity Management Pipeline as described above.

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 4 of 18

Location: The Project is primarily in the City of Agoura Hills and Westlake Village in Los Angeles County. Portions of the Project would be located in Ventura County. The Tapia Water Reclamation Facility is located at 731 Malibu Canyon Road in the City of Agoura Hills. The Las Virgenes Reservoir is located in Westlake Village. As to the AWPf site options, the Option 1 Agoura Hills site is located at 30800 Agoura Road on an undeveloped property on the south side of the street within the City of Agoura Hills, just east of the Westlake Village limits. The Option 2 Las Virgenes Reservoir site would be located on an undeveloped site adjacent to Las Virgenes Reservoir on its eastern shore. Pipelines are proposed in the City of Agoura Hills and Westlake Village. A portion of the Brine Pipeline would be constructed in the streets of Agoura Hills and Westlake Village. Most of the brine pipeline would extend outside of the JPA's jurisdiction and through the City of Thousand Oaks in Ventura County.

Comments and Recommendations

CDFW offers the comments and recommendations below to assist JPA in adequately identifying, avoiding, and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources. The PEIR should provide adequate and complete disclosure of the Project's potential impacts on biological resources [Pub. Resources Code, § 21061; CEQA Guidelines, §§ 15003(i), 15151]. CDFW looks forward to commenting on the PEIR when it is available.

Specific Comments

1. Waste Discharge Requirements for the Tapia WRF. According to the NOP, "new regulatory standards for discharge to Malibu Creek are being implemented and will have the effect of further restricting discharges absent significant and costly improvements to the Tapia WRF. Indirect potable reuse through advanced treatment of the excess recycled water was selected to redirect discharges from Malibu Creek." CDFW is concerned a decrease in the amount of water entering Malibu Creek watershed could substantially alter the present flow regime in Malibu Creek.
 - a) Water Order. Tapia WRF is subject to waste discharge requirements set forth in the National Pollutant Discharge Elimination System Permit Number CA0056014 (Order, effective August 1, 2017) issued by the California Regional Water Quality Control Board, Los Angeles Region. Per the Order, Tapia WRF is required to augment flow to sustain Southern California steelhead (*Oncorhynchus mykiss*; steelhead) habitat in Malibu Creek during the summer season from April 15 to November 15. In order to achieve this, 2.5 cubic feet per second (cfs) of maximum total flow must be measured at the Los Angeles County gauging station F-130-R. During the winter season from November 15 through April 15, Tapia WRF is required to maintain a minimum flow of 2.5 cfs.
 - b) Disclosure. CDFW recommends the PEIR disclose whether the Project would reduce flows below 2.5 cfs or eliminate flows entirely, both during the summer and/or winter season. If the Project proposes to modify flow release, the PEIR should provide a clear explanation of when those flow reductions would occur and how much flow would be reduced based on the time of year.
2. Potential Impacts on Fish. The Malibu Creek watershed supports or could support, including

Eric Schlageter
 Las Virgenes-Triunfo Joint Powers Authority
 October 11, 2021
 Page 5 of 18

but not limited to, the following species of fish: steelhead; tidewater goby (*Eucyclogobius newberryi*), and arroyo chub (*Gila orcuttii*). The existence of steelhead in the lower reach of Malibu Creek is probably mostly attributable to this flow augmentation from Tapia WRF. Discharges during summer months from Tapia WRF are important for maintaining aquatic organisms and riparian vegetation, thus directly and indirectly benefiting steelhead and other fish species. As such, the Project's potential to reduce discharge from Tapia WRF in the summer months to below 2.5 cfs or eliminate flows entirely could impact fish.

- a) Protection Status. Steelhead and tidewater goby are federal Endangered Species Act (ESA)-listed species. Arroyo chub is a California Species of Special Concern (SSC). As to CEQA, a species is considered endangered, rare, or threatened if it is a species of animal or plant that is presumed to be endangered, rare, or threatened as it is listed under ESA [CEQA Guidelines, § 15380(c)(2)]. Furthermore, CEQA provides protection not only for CESA-listed species, but for any species including but not limited to SSC which can be shown to meet the criteria for State listing. These SSC meet the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15380). Therefore, take of SSC could require a mandatory finding of significance (CEQA Guidelines, § 15065).
 - b) Analysis. CDFW recommends the PEIR discuss whether the Project could impact special status fish species, directly or indirectly through habitat modifications, as a function of potential reduction in flow releases from Tapia WRF. The PEIR should discuss potential impacts on fish based on the following factors: water availability; water flows; water quality; benthic invertebrates and microorganisms; and habitat requirements (e.g., pools, slower moving waters, water temperature, substrate, vegetation).
3. Impacts on Flow Regime and Biological Resources in Malibu Creek/Malibu Lagoon. The Project could reduce discharge from Tapia WRF to below 2.5 cfs or eliminate flows entirely. Reduced discharge would affect water availability and flows in Malibu Creek. As such, CDFW recommends the PEIR disclose how the Project may modify the current flow regime and potentially impact biological resources in Malibu Creek and Malibu Lagoon. At a minimum, the PEIR should provide the following:
- a) An analysis of the existing flow regime during the winter and summer seasons, and how that may change under Project conditions;
 - b) An analysis of potential Project-related effects on river hydraulics. This includes water depth (percent change), wetted perimeter (acres gained/lost), and velocity (percent change);
 - c) A comprehensive list of sensitive and special status plant and wildlife species, and sensitive plant communities occurring in Malibu Creek and Malibu Lagoon;
 - d) A discussion as to how each species or plant community may be significantly impacted directly or indirectly through habitat modification, as result of changes to hydrology (reduced flow) and hydraulics (water depth, wetted perimeter, velocity);

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 6 of 18

- e) A discussion of the Project's potential impacts on the [Malibu Valley Groundwater Basin](#) as well as groundwater dependent ecosystems within that groundwater basin (DWR 2021); and,
 - f) A discussion to address how the Project may potentially affect any on-going habitat recovery, species recovery, and habitat restoration efforts.
4. Rare Plants. According to the NOP, the Project could impact several species of rare plants, including Lyon's pentachaeta (*Lyon's pentachaeta*), during pipeline construction within Triunfo Creek Park. In addition to Lyon's pentachaeta, Catalina mariposa lily (*Calochortus catalinae*), Agoura Hills dudleya (*Dudleya cymosa* spp. *agourensis*), and Santa Cruz island lacepod (*Thysanocarpus conchuliferus*) also occur in Triunfo Creek Park. Lyon's pentachaeta and Agoura Hills dudleya may also occur in the Option 1 Agoura Road site for the new AWPf, as well as around the Las Virgenes Reservoir.
- a) Protection Status. Lyon's pentachaeta is listed under CESA and ESA. Canyon liveforever and Santa Cruz island lacepod are both ESA-listed. Catalina mariposa lily has a California Rare Plant Rank of 4.2. As to CESA, take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). As to CEQA, potential impacts on rare plants should be analyzed, disclosed, and mitigated in the Project's PEIR. CDFW considers adverse impacts to a species protected by CESA and ESA to be significant without mitigation under CEQA.
 - b) Survey and Analysis. In preparation of the PEIR, CDFW recommends JPA retain a qualified botanist to perform focused botanical surveys for rare plants. The survey should identify all individuals and populations, as well as plant communities supporting those rare plants, that could be impacted. Surveys should be conducted within the Project site and in all areas subject to Project-related ground-disturbing activities (e.g., staging, mobilization, vegetation clearing). Surveys should be performed at the times of year when plants will be both evident and identifiable. Botanical field surveys should be spaced throughout the growing season (CDFW 2018).
 - c) Disclosure. The PEIR should fully disclose any impacts on rare plants, which should include at a minimum where impacts would occur; number of individual plants impacted; population size and density; and acres of habitat/plant communities impacted.
 - d) Avoidance. If the Project will impact rare plants, CDFW recommends the PEIR provide measures to fully avoid impacts on rare plants and its habitat. This may include Project alternatives that would fully avoid impacts on rare plants (see **General Comment #6**).
 - e) Mitigation. If take or adverse impacts to rare plants cannot be avoided during Project activities or over the life of the Project, the PEIR should provide measures to mitigate for those impacts. Appropriate mitigation may include obtaining appropriate take authorization under CESA prior to implementing the Project (pursuant to Fish & Game Code, § 2080 *et seq.*). Appropriate authorization may include an Incidental Take Permit (ITP) or Consistency Determination, among other options [Fish & G. Code, §§ 2080.1, 2081, subds. (b) and (c)]. Additionally, CDFW recommends JPA provide compensatory mitigation for loss of rare plants and habitat. CDFW recommends JPA identify an

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 7 of 18

appropriate site to preserve rare plants in perpetuity (also see **General Comments #8 and #9**).

- f) CESA. To obtain appropriate take authorization under CESA, early consultation with CDFW is encouraged, as significant modification to a project and mitigation measures may be required to obtain a CESA permit. Revisions to the Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP unless the project CEQA document addresses all project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.
5. Mountain Lion (*Puma concolor*). The Project site is within or adjacent to the Santa Monica Mountains where an evolutionarily significant unit of mountain lion (*Puma concolor*) in southern coastal California occurs. The Project would require ground-disturbing activities to facilitate construction of the AWPf and pipelines in natural areas where mountain lion could occur. As such, the Project could impact mountain lion especially natal dens due to increased human presence, traffic, noise, and artificial lighting.
- a) Protection Status. The mountain lion is a specially protected mammal in the State (Fish and G. Code, § 4800). In addition, on April 21, 2020, the California Fish and Game Commission accepted a petition to list an evolutionarily significant unit of mountain lion in southern coastal California as threatened under CESA (CDFW 2020). As a CESA candidate species, the mountain lion in southern California is granted full protection of a threatened species under CESA.
- b) Habitat Assessment. In preparation of the PEIR, CDFW recommends JPA retain a qualified biologist familiar with mountain lion ecology to conduct a habitat suitability assessment for mountain lion. Surveys should focus on areas of the Project that could support mountain lion dens. This includes any areas with caves and other natural cavities. Thickets in brush and timber provide cover and are used for denning. If necessary, camera traps should be used to sufficiently determine presence/absence of mountain lion.
- c) Disclosure. The PEIR should fully disclose potential impacts on mountain lion. The PEIR should also provide a thorough discussion of the Project's potential impacts on mountain lion habitat. Impacts include (but are not limited to) habitat loss and fragmentation, narrowing of a wildlife corridor, and introduction of barriers to wildlife movement. This discussion should be supported by studies to document wildlife activity and movement through the Project site where mountain lion could occur.
- d) Avoidance. If the Project site supports mountain lion denning sites, CDFW recommends the PEIR provide measures to fully avoid impacts on denning sites. Additionally, CDFW recommends the PEIR provide measures to fully avoid potential impacts on mountain lion habitat, specifically, avoidance of any portions of the Project that may result in narrowing of wildlife corridors, introduction of barriers to wildlife movement, and/or habitat fragmentation.

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 8 of 18

- e) Mitigation. If take or adverse impacts to mountain lion cannot be avoided during Project activities, the PEIR should provide measures to mitigate for those impacts. Appropriate mitigation may include obtaining appropriate take authorization under CESA prior to implementing the Project (pursuant to Fish & Game Code, § 2080 *et seq.*). Additionally, CDFW recommends JPA provide compensatory mitigation for impacts on mountain lion and/or habitat.
6. California Red-Legged Frog (*Rana draytonii*). California red-legged frogs (red-legged frog) occur in the Santa Monica Mountains/Malibu Creek watershed. Red-legged frogs require aquatic habitat for dispersal, breeding, attaining metamorphosis, and refugia. Reducing or eliminating discharge from Tapia WRF could impact red-legged frogs in the vicinity of Malibu Creek, especially during a below-average rainy season with no water release to Malibu Creek flows thus sustain habitat suitable for red-legged frog.
- a) Protection Status. Red-legged frog is listed under ESA and is a SSC.
- b) Analysis and Disclosure. CDFW recommends the PEIR discuss and disclose whether the Project could impact red-legged frog, directly or indirectly through habitat modifications, as a function of potential reduction or elimination of flow releases from Tapia WRF. The PEIR should discuss potential impacts on red-legged frog based on water availability and habitat requirements required by the species for dispersal, breeding, attaining metamorphosis, and refugia.
7. Jurisdictional Waters. According to U.S. Fish and Wildlife Service's (USFWS) [National Wetland Inventory](#), two streams flow through Triunfo Creek Park and into Triunfo Creek (USFWS 2021). The Project could impact streams during pipeline construction within Triunfo Creek Park. Moreover, the Project could modify the bed, channel, or bank of Malibu Creek by potentially modifying the current flow regime.
- a) Stream Delineation and Impact Assessment. CDFW recommends the PEIR provide a stream delineation and analysis of impacts on any river, stream, or lake¹. The delineation should be conducted pursuant to the to the USFWS wetland definition adopted by CDFW (Cowardin et al. 1979). Be advised that some wetland and riparian habitats subject to CDFW's authority may extend beyond the jurisdictional limits of the U.S. Army Corps of Engineers' Section 404 permit and Regional Water Quality Control Board Section 401 Certification. Modifications to a river, creek, or stream in one area may result in bank erosion, channel incision, or drop in water level along that stream outside of the immediate impact area. Therefore, CDFW recommends the PEIR discuss whether impacts on streams within the Project site would impact those streams immediately outside of the Project site where there is hydrologic connectivity. Potential impacts such as changes to drainage pattern, runoff, and sedimentation should be discussed.
- b) Avoidance and Setbacks. CDFW recommends the Project avoid impacting streams and associated vegetation. Herbaceous and vegetation adjacent to streams protects the physical and ecological integrity of these water features and maintains natural sedimentation processes. Where the Project would occur near streams but would avoid

¹ Please note that "any river, stream, or lake" includes those that are dry for periods of time as well as those that flow year-round.

Eric Schlageter
 Las Virgenes-Triunfo Joint Powers Authority
 October 11, 2021
 Page 9 of 18

impacts on streams, the PEIR should provide a justification as to why a proposed setback distance would be effective to avoid impacts on the stream and associated vegetation.

- c) Mitigation. If impacts on streams and associated vegetation are unavoidable, CDFW recommends the PEIR provide compensatory mitigation for impacts on streams and potential loss of associated riparian vegetation. JPA could provide an on- or off-site mitigation. The PEIR should discuss the suitability of selected location(s) for mitigating impacts to streams and associated vegetation.
 - d) Lake and Streambed Alteration (LSA) Program. CDFW has authority over activities in streams and/or lakes that may divert or obstruct the natural flow, or change the bed, channel, or bank (including vegetation associated with the stream or lake) of a river or stream or use material from a streambed. For any such activities, the Project applicant (or "entity") must notify CDFW pursuant to Fish and Game Code Section 1600 et seq. CDFW's issuance of an LSA Agreement for a project that is subject to CEQA will require CEQA compliance actions by CDFW as a Responsible Agency. As a Responsible Agency, CDFW may consider the environmental document of the local jurisdiction (Lead Agency) for the Project. To minimize additional requirements by CDFW pursuant to section 1600 et seq. and/or under CEQA, the PEIR should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the LSA Agreement. Please visit CDFW's [Lake and Streambed Alteration Program](#) for more information (CDFW 2021b).
 - e) Hydrological Evaluation. As part of the LSA Notification process, CDFW requests a hydrological evaluation of the 100, 50, 25, 10, 5, and 2-year storm event to provide information on how water and sediment is conveyed through the Project site. Additionally, the hydrological evaluation should evaluate streams under existing and post-Project conditions and erosion/scour potential post-Project.
8. Oak Trees (*Quercus* genus) and Oak Woodlands (*Quercus* genus Woodland Alliance). According to the NOP, the Project could result in removal of oak trees and loss of oak woodlands during construction of pipelines within Triunfo Creek Park. CDFW considers oak woodlands to be a sensitive plant community. Oak woodlands serve several important ecological functions such as protecting soils from erosion and land sliding, regulating water flow in watersheds, and maintaining water quality in streams and rivers. Oak woodlands also have higher levels of biodiversity than any other terrestrial ecosystem in California (Block et al. 1990). Oak trees provide nesting and perching habitat for approximately 170 species of birds (Griffin and Muick 1990). Moreover, oak trees and woodlands are protected by the Oak Woodlands Conservation Act (pursuant under Fish and Game Code sections 1360-1372) and Public Resources Code section 21083.4 due to the historic and on-going loss of these resources.
- a) Arborist Report. In preparation of the PEIR, CDFW recommends JPA retain a qualified arborist to census all oak trees that could be impacted by the Project. The tree census should provide information on the presence of pests and diseases, including (but not limited to): [sudden oak death](#) (*Phytophthora ramorum*), [thousand canker fungus](#) (*Geosmithia morbida*), [Polyphagous shot hole borer](#) (*Euwallacea* spp.), and [goldspotted oak borer](#) (*Agrilus auroguttatus*) (Phytosphere Research 2012; TCD 2020; UCANR

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 10 of 18

2020; UCIPM 2013). A tree report should be included in the PEIR.

- b) Disclosure. Adequate disclosure includes providing the following information at a minimum: 1) location of each tree and area of oak woodland impacted; 2) scientific (Genus, species, subspecies, or variety) and common name of each tree and understory plant species impacted; 3) the size (diameter at breast height, inches) of each tree impacted; 4) a clear identifier to distinguish heritage trees; 5) acres of oak woodlands impacted; 6) mitigation ratio for individual trees and acres of oak woodlands; 7) total number of replacement trees and acres of oak woodlands; and, 8) total number of replacement trees and appropriate understory species to occur in suitable on- and/or off-site mitigation lands.
 - c) Avoidance. CDFW recommends the PEIR provide measures to avoid impacts to oak trees and oak woodlands during the Project. The PEIR should provide measures to fully protect the Critical Root Zone of all oak trees not targeted for removal. The PEIR should also provide measures to protect the outer edge of oak woodlands with appropriate setbacks. The PEIR should provide a justification as to why proposed setback distance(s) would be effective to avoid impacts on oak trees and oak woodlands in perpetuity.
 - d) Mitigation. For unavoidable Project impacts, CDFW recommends creating or restoring on- or off-site oak woodland habitat at no less than 2:1 the number of oak trees and acres of oak woodland habitat. The number of replacement trees and oak woodland habitat acres should be higher if the Project would impact large oak trees; impact an oak woodland supporting rare, sensitive, or special status plants and wildlife; or impact an oak woodland with a State rarity ranking of S1, S2, or S3 (see **General Comment #3a**). CDFW recommends the PEIR discuss why mitigation proposed by JPA would reduce impacts on oak woodlands to less than significant and would be effective to mitigate for the number of trees, size of trees (e.g., heritage trees), and acres of habitat impacted. CDFW recommends the PEIR provide an on- or off-site mitigation plan and discuss the suitability of selected location(s) for mitigating impacts to oak trees and oak woodlands. The PEIR should provide information about reference sites, with similar species and habitat as being mitigated and the suitability of selected reference site(s) to inform the Project's mitigation plan. Lastly, a mitigation plan should provide specific mitigation goals and actions to achieve those goals to establish self-sustaining oak trees and oak woodlands.
 - e) Pest Management. Project activities have the potential to spread tree pests and diseases throughout the Project site and into adjacent natural habitat not currently exposed to these stressors. This could result in expediting the loss of native trees and woodlands. As such, CDFW recommends the PEIR include an infectious tree disease management plan or provide mitigation measures, developed in consultation with an arborist, and describe how the plan or mitigation measures will avoid or reduce the spread of tree insect pests and diseases.
9. Nesting Birds. The Project may remove trees that could support nesting birds. Moreover, Project activities occurring during the nesting bird season, especially in areas providing suitable nesting habitat, could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment.

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 11 of 18

- a) Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Code of Federal Regulations, Title 50, § 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). It is unlawful to take, possess, or needlessly destroy the nest or eggs of any raptor.
 - b) CDFW recommends that measures be taken to fully avoid impacts to nesting birds. CDFW recommends the PEIR include a measure whereby the Project avoids ground-disturbing activities (e.g., mobilizing, staging, trenching, and grading) and vegetation removal during the avian breeding season which generally runs from February 15 through September 15 (as early as January 1 for some raptors) to avoid take of birds, raptors, or their eggs. If avoidance is not feasible, the PEIR should provide underlying reasons for JPA's determination that avoidance is not feasible, even if it would substantially lessen or avoid significant effects on nesting birds. The PEIR should include other feasible and specific mitigation measures that would provide a comparable lessening of the Project's potentially significant effect on nesting birds.
10. [Los Angeles County Significant Ecological Areas \(SEAs\)](#). The Project site is within the Santa Monica Mountain SEA (LACDRP 2021a). CDFW recommends the PEIR provide a discussion of Project impacts on biological resources and beneficial uses within the Santa Monica Mountain SEA.
 11. [Santa Monica Mountains Local Coastal Program](#). The Project site is within the [Santa Monica Mountains Local Coastal Program](#) planning area (LACDRP 2021b). CDFW recommends the PEIR provide a discussion of Project impacts on biological resources and beneficial uses within the Santa Monica Mountains Local Coastal Program planning area.

General Comments

- 1) Disclosure. An environmental document should provide an adequate, complete, and detailed disclosure about the effect which a proposed project is likely to have on the environment (Pub. Resources Code, § 20161; CEQA Guidelines, §15151). Adequate disclosure is necessary so CDFW may provide comments on the adequacy of proposed avoidance, minimization, or mitigation measures, as well as to assess the significance of the specific impact relative to plant and wildlife species impacted (e.g., current range, distribution, population trends, and connectivity).
- 2) Mitigation Measures. Public agencies have a duty under CEQA to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures [CEQA Guidelines, §§ 15002(a)(3), 15021]. Pursuant to CEQA Guidelines section 15126.4, an environmental document "shall describe feasible measures which could mitigate for impacts below a significant level under CEQA."
 - a) Level of Detail. Mitigation measures must be feasible, effective, implemented, and fully enforceable/imposed by the lead agency through permit conditions, agreements, or other legally binding instruments (Pub. Resources Code, § 21081.6(b); CEQA Guidelines, § 15126.4). A public agency "shall provide the measures that are fully enforceable through permit conditions, agreements, or other measures" (Pub.

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 12 of 18

Resources Code, § 21081.6). CDFW recommends that JPA provide mitigation measures that are specific, detailed (i.e., responsible party, timing, specific actions, location), and clear in order for a measure to be fully enforceable and implemented successfully via a mitigation monitoring and/or reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097). Adequate disclosure is necessary so CDFW may provide comments on the adequacy and feasibility of proposed mitigation measures.

- b) Disclosure of Impacts. If a proposed mitigation measure would cause one or more significant effects, in addition to impacts caused by the Project as proposed, the PEIR should include a discussion of the effects of proposed mitigation measures [CEQA Guidelines, § 15126.4(a)(1)]. In that regard, the PEIR should provide an adequate, complete, and detailed disclosure about a project's proposed mitigation measure(s). Adequate disclosure is necessary so CDFW may assess the potential impacts of proposed mitigation measures.
- 3) Biological Baseline Assessment. An adequate biological resources assessment should provide a complete assessment and impact analysis of the flora and fauna within and adjacent to a project site and where a project may result in ground disturbance. The assessment and analysis should place emphasis upon identifying endangered, threatened, sensitive, regionally, and locally unique species, and sensitive habitats. Impact analysis will aid in determining any direct, indirect, and cumulative biological impacts, as well as specific mitigation or avoidance measures necessary to offset those impacts. CDFW recommends avoiding any sensitive natural communities found on or adjacent to the Project site. CDFW also considers impacts SSC a significant direct and cumulative adverse effect without implementing appropriate avoidance and/or mitigation measures. The PEIR should include the following information:
- a) Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region [CEQA Guidelines, § 15125(c)]. The PEIR should include measures to fully avoid and otherwise protect Sensitive Natural Communities from Project-related impacts. CDFW considers these communities as threatened habitats having both regional and local significance. Plant communities, alliances, and associations with a state-wide ranking of S1, S2, and S3 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by visiting the [Vegetation Classification and Mapping Program - Natural Communities](#) webpage (CDFW 2021b);
- b) A thorough, recent, floristic-based assessment of special status plants and natural communities following CDFW's [Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities](#) (CDFW 2018). Adjoining habitat areas should be included where Project construction and activities could lead to direct or indirect impacts off site;
- c) Floristic, alliance- and/or association-based mapping and vegetation impact assessments conducted at a project site and within the neighboring vicinity. The [Manual of California Vegetation](#) (MCV), second edition, should also be used to inform this mapping and assessment (Sawyer et al. 2009). Adjoining habitat areas should be included in this assessment where Project activities could lead to direct or indirect impacts off site. Habitat mapping at the alliance level will help establish baseline

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 13 of 18

vegetation conditions;

- d) A complete, recent, assessment of the biological resources associated with each habitat type on site and within adjacent areas that could also be affected by a project. CDFW's [California Natural Diversity Database](#) (CNDDDB) in Sacramento should be contacted to obtain current information on any previously reported sensitive species and habitat (CDFW 2021c). An assessment should include a nine-quadrangle search of the CNDDDB to determine a list of species potentially present at a project site. A lack of records in the CNDDDB does not mean that rare, threatened, or endangered plants and wildlife do not occur in the project site. Field verification for the presence or absence of sensitive species is necessary to provide a complete biological assessment for adequate CEQA review [CEQA Guidelines, § 15003(i)];
 - e) A complete, recent, assessment of rare, threatened, and endangered, and other sensitive species on site and within the area of potential effect, including SSC and California Fully Protected Species (Fish & G. Code, §§ 3511, 4700, 5050, and 5515). Species to be addressed should include all those which meet the CEQA definition of endangered, rare, or threatened species (CEQA Guidelines, § 15380). Seasonal variations in use of a project site should also be addressed such as wintering, roosting, nesting, and foraging habitat. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, may be required if suitable habitat is present. See CDFW's [Survey and Monitoring Protocols and Guidelines](#) for established survey protocol for select species (CDFW 2021d). Acceptable species-specific survey procedures may be developed in consultation with CDFW and the USFWS; and,
 - f) A recent wildlife and rare plant survey. CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of a proposed project may warrant periodic updated surveys for certain sensitive taxa, particularly if build out could occur over a protracted time frame or in phases.
- 4) Data. CEQA requires that information developed in environmental impact reports be incorporated into a database which may be used to make subsequent or supplemental environmental determinations [Pub. Resources Code, § 21003, subd. (e)]. Accordingly, please report any special status species and natural communities detected by completing and submitting [CNDDDB Field Survey Forms](#) (CDFW 2021f). JPA should ensure data collected for the preparation of the PEIR be properly submitted, with all data fields applicable filled out. The data entry should also list pending development as a threat and then update this occurrence after impacts have occurred.
- 5) Biological Direct, Indirect, and Cumulative Impacts. CDFW recommends providing a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. The PEIR should address the following:
- a) A discussion regarding Project-related indirect impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands [e.g.,

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 14 of 18

preserve lands associated with a Natural Community Conservation Plan (Fish & G. Code, § 2800 et. seq.]. Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated in the PEIR;

- b) A discussion of both the short-term and long-term effects to species population distribution and concentration and alterations of the ecosystem supporting the species impacted [CEQA Guidelines, § 15126.2(a)];
 - c) A discussion of potential adverse impacts from lighting, noise, temporary and permanent human activity, and exotic species, and identification of any mitigation measures;
 - d) A discussion of Project-related changes on drainage patterns; the volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-Project fate of runoff from the Project sites. The discussion should also address the potential water extraction activities and the potential resulting impacts on the habitat (if any) supported by the groundwater. Mitigation measures proposed to alleviate such Project impacts should be included;
 - e) An analysis of impacts from proposed changes to land use designations and zoning, and existing land use designation and zoning located nearby or adjacent to natural areas that may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the PEIR; and,
 - f) A cumulative effects analysis, as described under CEQA Guidelines section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant and wildlife species, habitat, and vegetation communities. If JPA determines that the Project would not have a cumulative impact, the PEIR should indicate why the cumulative impact is not significant. JPA's conclusion should be supported by facts and analyses [CEQA Guidelines, § 15130(a)(2)].
- 6) Project Description and Alternatives. To enable CDFW to adequately review and comment on the proposed Project from the standpoint of the protection of plants, fish, and wildlife, we recommend the following information be included in the PEIR:
- a) A complete discussion of the purpose and need for, and description of, the proposed Project, including all staging areas; access routes to the construction and staging areas; fuel modification footprint; and grading footprint;
 - b) Pursuant to CEQA Guidelines section 15126.6(a), an environmental document "shall describe a reasonable range of potentially feasible alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project." CEQA Guidelines section 15126.6(f)(2) states if the Lead Agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion and should include reasons in the environmental document; and,

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 15 of 18

- c) A range of feasible alternatives to the Project location and design features to avoid or otherwise minimize direct and indirect impacts to sensitive biological resources and wildlife movement areas. CDFW recommends JPA consider configuring Project construction and activities, as well as the development footprint, in such a way as to fully avoid impacts to sensitive and special status plants and wildlife species, habitat, and sensitive vegetation communities. CDFW also recommends JPA consider establishing appropriate setbacks from sensitive and special status biological resources. Setbacks should not be impacted by ground disturbance or hydrological changes for the duration of the Project and from any future development. As a general rule, CDFW recommends reducing or clustering the development footprint to retain unobstructed spaces for vegetation and wildlife and provide connections for wildlife between properties and minimize obstacles to open space.

Project alternatives should be thoroughly evaluated, even if an alternative would impede, to some degree, the attainment of the Project objectives or would be more costly (CEQA Guidelines, § 15126.6). The PEIR “shall” include sufficient information about each alternative to allow meaningful evaluation, public participation, analysis, and comparison with the proposed Project (CEQA Guidelines, § 15126.6).

- d) Where the Project may impact aquatic and riparian resources, CDFW recommends JPA consider alternatives that would fully avoid impacts to such resources. CDFW also recommends alternatives that would allow not impede, alter, or otherwise modify existing surface flow, watercourse and meander, and water-dependent ecosystems and vegetation communities. Project-related designs should consider elevated crossings to avoid channelizing or narrowing of streams. Any modifications to a river, creek, or stream may cause or magnify upstream bank erosion, channel incision, and drop in water level and cause the stream to alter its course of flow.
- 7) Translocation/Salvage of Plants and Animal Species. Translocation and transplantation is the process of removing an individual from a project site and permanently moving it to a new location. CDFW generally does not support the use of translocation or transplantation as the primary mitigation strategy for unavoidable impacts to rare, threatened, or endangered plant or animal species. Studies have shown that these efforts are experimental and the outcome unreliable. CDFW has found that permanent preservation and management of habitat capable of supporting these species is often a more effective long-term strategy for conserving sensitive plants and animals and their habitats.
- 8) Compensatory Mitigation. The PEIR should include mitigation measures for adverse project-related direct or indirect impacts to sensitive and special status plants, animals, and habitats. Mitigation measures should emphasize avoidance and reduction of Project-related impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed. Areas proposed as mitigation lands should be protected in perpetuity with a conservation easement, financial assurance and dedicated to a qualified entity for long-term management and monitoring. Under Government Code, section 65967, the Lead Agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 16 of 18

on mitigation lands it approves.

- 9) Long-term Management of Mitigation Lands. For proposed preservation and/or restoration, the PEIR should include measures to protect the targeted habitat values from direct and indirect negative impacts in perpetuity. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include (but are not limited to) restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased human intrusion. An appropriate non-wasting endowment should be set aside to provide for long-term management of mitigation lands.

Conclusion

CDFW requests consultation with JPA before and during preparation of the PEIR to resolve potential concerns regarding impacts on biological resources [CEQA Guidelines, §§ 15006(g), 15083]. The consultation will further help prepare a CEQA document that will meet CDFW's needs as a Responsible Agency under lake and streambed alteration regulatory authority and/or authority under the California Endangered Species Act [Fish & G. Code, §§ 1600 et seq.; 2080.1; 2081 subds. (b) and (c)].

We appreciate the opportunity to comment on the NOP for the Pure Water Project Las Virgenes-Triunfo Project to assist the JPA in identifying and mitigating Project impacts on biological resources. If you have any questions or comments regarding this letter, please contact Ruby Kwan-Davis, Senior Environmental Scientist (Specialist), at Ruby.Kwan-Davis@wildlife.ca.gov or (562)-619-2230.

Sincerely,

DocuSigned by:

B6E58CFE24724F5...

Erinn Wilson-Olgin
Environmental Program Manager I
South Coast Region

ec: CDFW

Erinn Wilson-Olgin, Los Alamitos – Erinn.Wilson-Olgin@wildlife.ca.gov
Victoria Tang, Los Alamitos – Victoria.Tang@wildlife.ca.gov
Ruby Kwan-Davis, Los Alamitos – Ruby.Kwan-Davis@wildlife.ca.gov
Felicia Silva, Los Alamitos – Felicia.Silva@wildlife.ca.gov
Julisa Portugal, Los Alamitos – Julisa.Portugal@wildlife.ca.gov
Frederic Rieman, Los Alamitos – Frederic.Rieman@wildlife.ca.gov
Steve Gibson, Los Alamitos – Steve.Gibson@wildlife.ca.gov
Baron Barrera, Los Alamitos – Baron.Barrera@wildlife.ca.gov
Kyle Evans, Los Alamitos – Kyle.Evans@wildlife.ca.gov
Cindy Hailey, San Diego – Cindy.Hailey@wildlife.ca.gov
CEQA Program Coordinator, Sacramento – CEQACommentLetters@wildlife.ca.gov

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 17 of 18

State Clearinghouse

Office of Planning and Research – State.Clearinghouse@opr.ca.gov

U.S. Fish and Wildlife Service

Chris Dellith – Chris_Dellith@fws.gov

National Marine Fisheries Service

Rick Bush – Rick.Bush@noaa.gov

Anthony Spina – Anthony.Spina@noaa.gov

California Department of Parks and Recreation

Danielle Lefer – Danielle.Lefer@parks.ca.gov

References:

- Block, W.M., Morrison, M.M., Verner, J. 1990. Wildlife and oak-woodland interdependency. *Fremontia* 18(3):72-76.
- [CDFW] California Department of Fish and Wildlife. 2020. Notice of Findings - Mountain Lion ESU declared a candidate species. Available from: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=178623&inline>
- [CDFWa] California Department of Fish and Wildlife. 2021. Lake and Streambed Alteration Program. Available from: <https://wildlife.ca.gov/Conservation/LSA>
- [CDFWb] California Department of Fish and Wildlife. 2021. Natural Communities. Available from: <https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities>
- [CDFWc] California Department of Fish and Wildlife. 2021. California Natural Diversity Database. Available from: <https://wildlife.ca.gov/Data/CNDDDB>
- [CDFWd] California Department of Fish and Wildlife. 2021. Survey and Monitoring Protocols and Guidelines. Available from: <https://wildlife.ca.gov/conservation/survey-protocols>
- [CDFW] California Department of Fish and Wildlife. 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. Available from: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline>
- [DWR] California Department of Water Resources. 2021. Natural Communities Commonly Associated with Groundwater (NCCAG) dataset. [Accessed 28 September 2021]. Available from: <https://gis.water.ca.gov/app/NCDatasetViewer/#> .
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service. FWS/OBS-79/31. Washington, DC.
- Griffin and Muick. 1990. California Native Oaks: Past and Present. *Fremontia* 18(3): 4-12.
- [LACDRPa] Los Angeles County Department of Regional Planning. 2021. Significant Ecological Areas Program – Maps. Available from: <https://planning.lacounty.gov/site/sea/maps/>
- [LACDRPb] Los Angeles County Department of Regional Planning. 2021. Santa Monica Mountains Local coastal Program. Available from: <https://planning.lacounty.gov/coastal/smm>
- Phytosphere Research. 2012. Understanding and Managing Sudden Oak Death in California. Available from: <http://phytosphere.com/SODmgtPUB/pg6Sidebar1-1SODmgtpub.htm>.
- Sawyer, J. O., Keeler-Wolf, T., and Evens J.M. 2009. A Manual of California Vegetation, 2nd ed. ISBN 978-0-943460-49-9.

Eric Schlageter
Las Virgenes-Triunfo Joint Powers Authority
October 11, 2021
Page 18 of 18

[TCD] Thousand Cankers Disease. 2020. What is Thousand Cankers? Available from:
<http://thousandcankers.com/>.

[UCANR] University of California Agriculture and Natural Resources Division. 2020. Invasive Shot Hole Borers. Available from: <https://ucanr.edu/sites/pshb/>.

[UCIPM] University of California Statewide Integrated Pest Management Program. 2013. How to Manage Pests. Pests in Gardens and Landscapes. Goldspotted Oak Borer. Available from: <http://ipm.ucanr.edu/PMG/PESTNOTES/pn74163.html>.

[USFWS] United States Fish and Wildlife Service. 2021. Wetlands Mapper. [Accessed 28 September 2021]. Available from: <https://www.fws.gov/wetlands/data/mapper.html>.